Usage Focused Interfaces
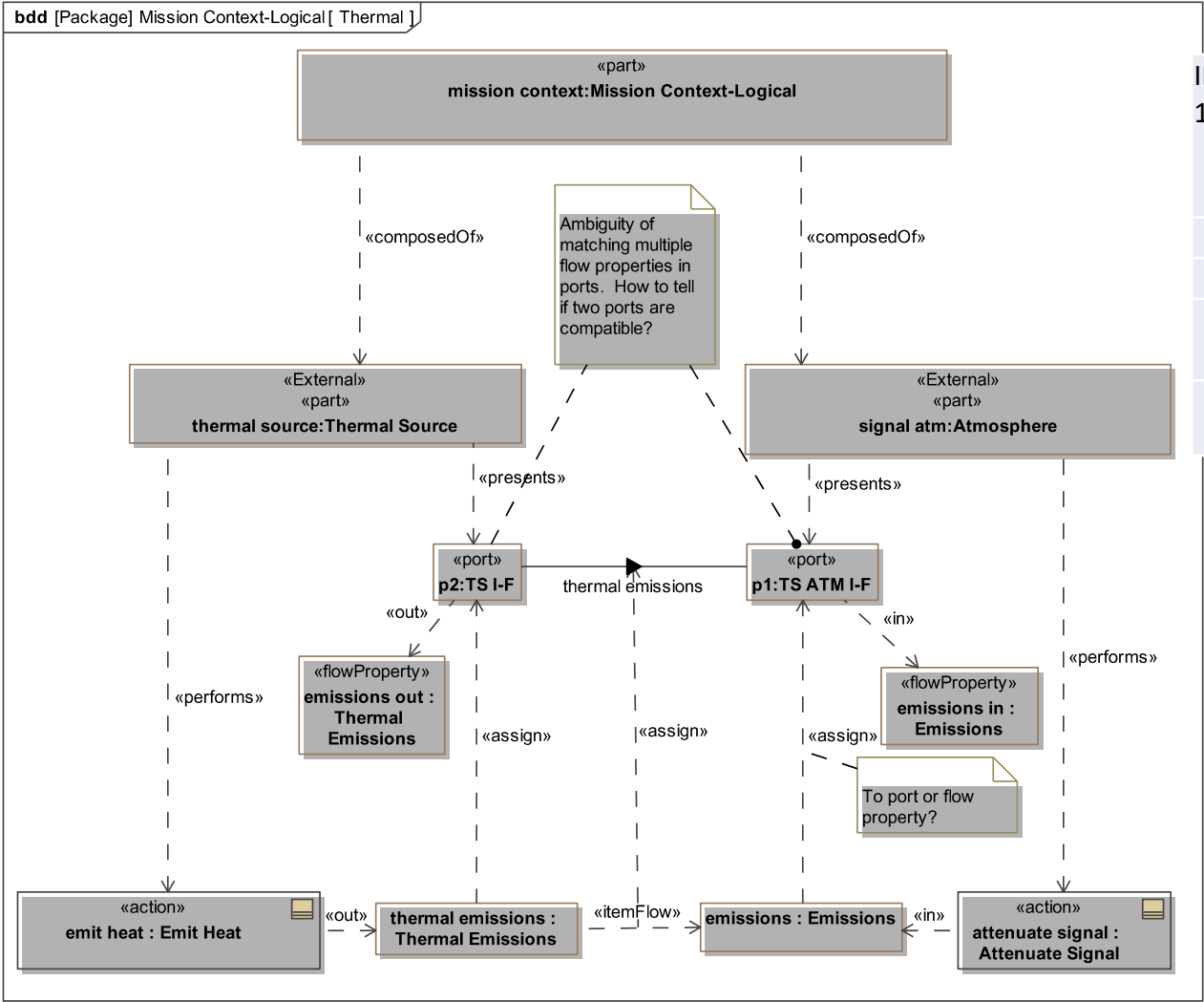
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Functional Exchange

bdd [Package] Mission Context-Logical [Thermal]

«part»
mission context:Mission Context-Logical

«composedOf»

Ambiguity of matching multiple flow properties in ports. How to tell if two ports are compatible?

«composedOf»

«External»
«part»
thermal source:Thermal Source

«External»
«part»
signal atm:Atmosphere

«presents»

«presents»

«port»
p2:TS I-F

thermal emissions

«port»
p1:TS ATM I-F

«out»

«in»

«performs»

«flowProperty»
emissions out :
Thermal
Emissions

«flowProperty»
emissions in :
Emissions

«performs»

«assign»

«assign»

«assign»

To port or flow property?

«action»
emit heat : Emit Heat

«out»

thermal emissions :
Thermal Emissions

«itemFlow»

emissions : Emissions

«in»

«action»
attenuate signal :
Attenuate Signal

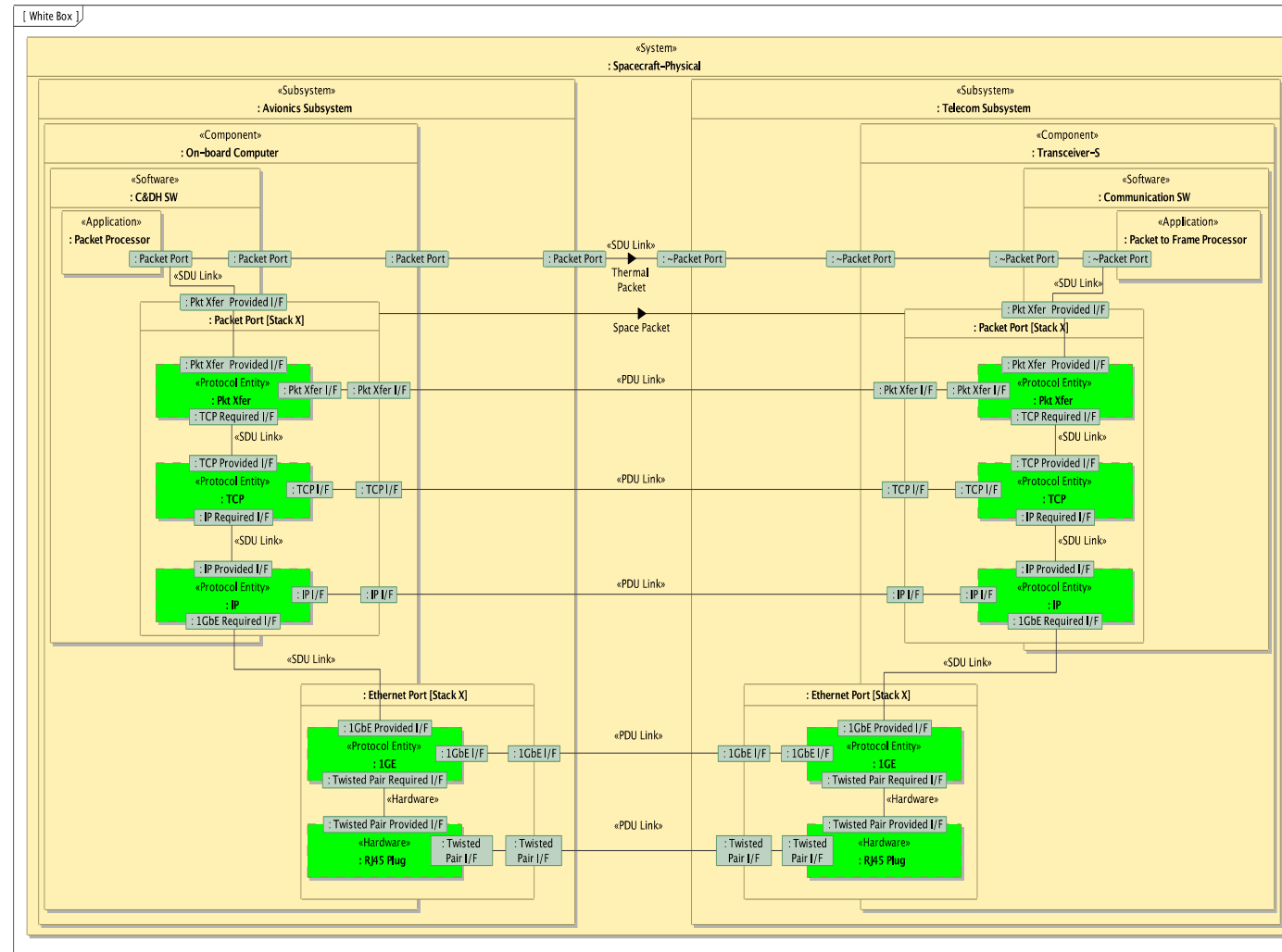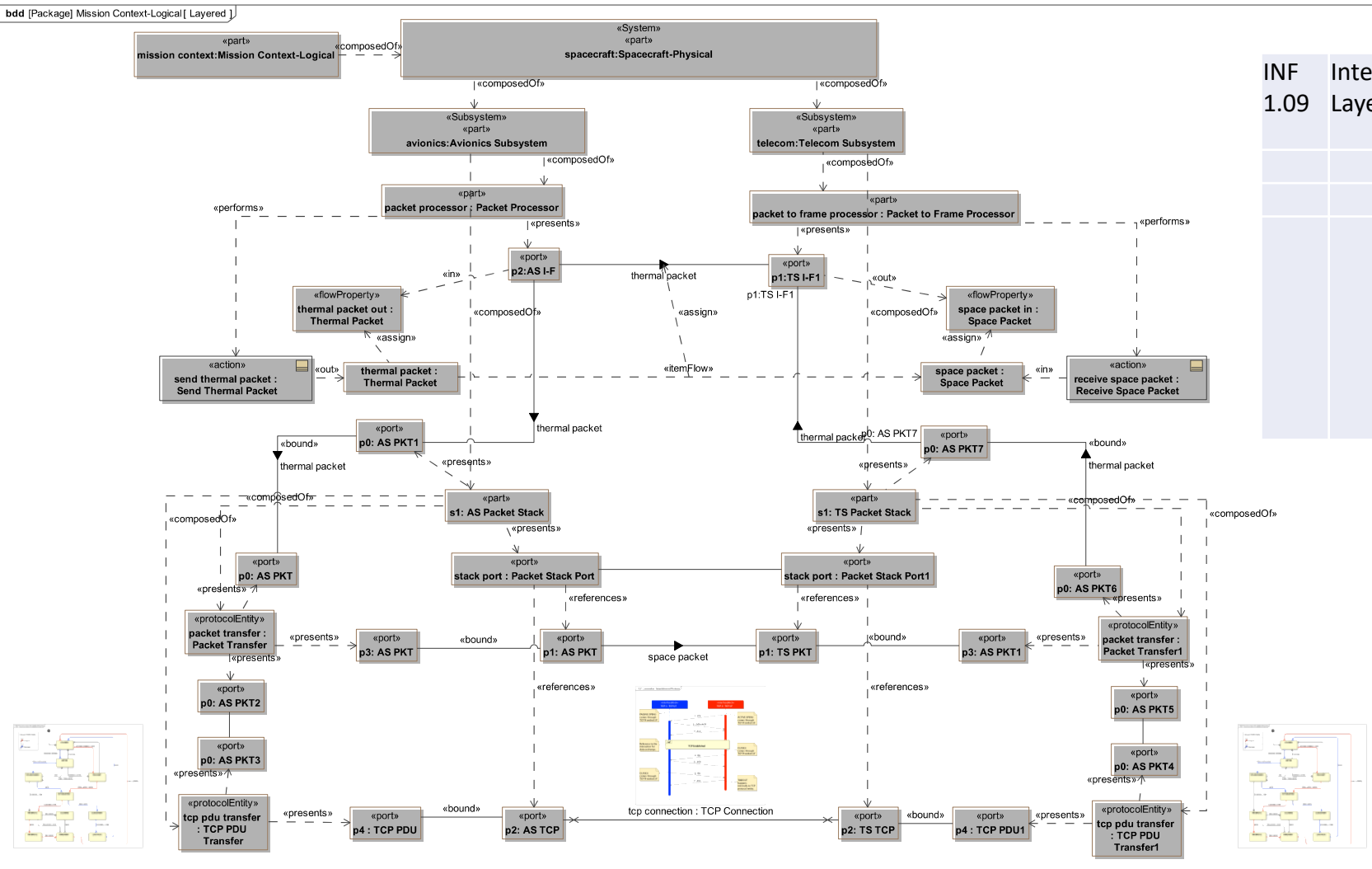| INF 1.10	Allocating Functional Exchange to Interfaces	Proposals for SysML v2 shall provide the capability to allocate or bind the outputs and inputs of a function to interface ends (or nested interface ends).
		Supporting Information:
		It is expected that there are validation rules to ensure consistency between the inputs and outputs of a function and the interface ends.
		This allocate or binding should be inherited by the Component subclasses.

Layered Interface Example SysML 1.x
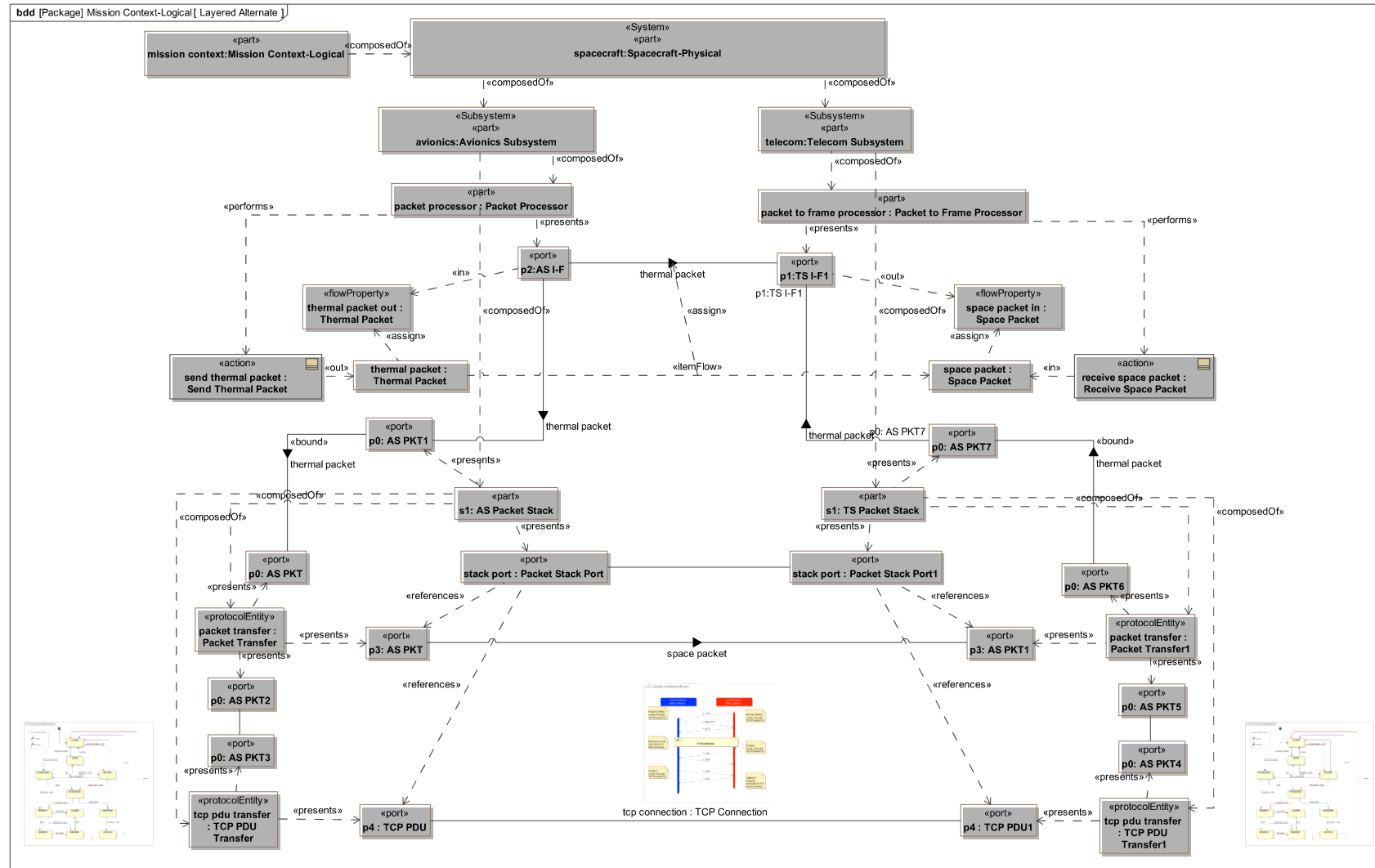
Layered Interface Example SysML 2.0

INF 1.09	Interface Layers	Proposals for SysML v2 shall provide the capability to represent interfaces between layers of an interface stack.
		Supporting Information: A layer of a stack can be represented as a component. A layer in a stack transforms the data to match the input to the adjacent layer. For example, an application layer may correspond to a component that transforms packets to match the TCP layer, and the TCP layer may correspond to a component that transforms the data to match the IP layer.

Layered Interface Example SysML 2.0 - Alt

Behavior Linked to Interfaces